

CLAIMS

We claim:

1. An intervertebral spacer device comprising:

first and second plate members, each having first and second plate surfaces thereof, said plate members being disposed in a spaced apart relationship such that said first plate surfaces oppose one another, and said second plate surfaces face in opposite directions; and

a convex element by which said first and second plate members are coupled to one another, by said convex element being mounted to said second plate member and maintained against said first plate member, and being disposed such that at least a portion of a load applied to said second plate surfaces is transmitted to said convex element,

said mounting of said convex element to said second plate member establishing a center of rotation between said first and second plate surfaces about which said first and second plate members rotate relative to one another,

said mounting of said convex element to said second plate member and said maintenance of said convex element against said first plate member together preventing said first and second plate members from becoming uncoupled from one another under a load applied to said first and second plate surfaces;

wherein said convex element is maintained against said first plate member by a retaining wall and a retaining ring, the retaining wall being on the first plate member and circumferentially surrounding a wide end of said convex element, the retaining ring extending from an annular groove in the retaining wall such that at least a portion of the wide end of said convex element is disposed between said first plate member and the retaining ring, such that said convex element is held against said first plate member thereby.

2. The device as set forth in claim 1, wherein said convex element is mounted to said second plate member by a ball captured in a curvate volume provided by said convex element.
3. The device as set forth in claim 2, wherein said convex element includes a belleville washer having the wide end and a narrow end having the curvate volume.

4. The device as set forth in claim 1, wherein said mounting of said convex element to said second plate member includes a post structure extending outwardly from said second plate member, which post structure includes said ball at an end of said post structure.

5. The device as set forth in claim 4, wherein said mounting of said convex element to said second plate member further includes a threaded bore in said post structure that extends axially from said ball head toward said second plate member, and which bore receives therein a threaded set screw such that prior to an insertion of the set screw therein, said bore permits the ball to compress radially inwardly, and such that after the insertion of said set screw said ball is not readily radially compressible.

6. The device as set forth in claim 4, wherein said mounting of said convex element to said second plate member further includes said curvate volume, said convex element includes a belleville washer, and said belleville washer includes a central opening that includes said curvate volume for receiving and holding therein said ball.